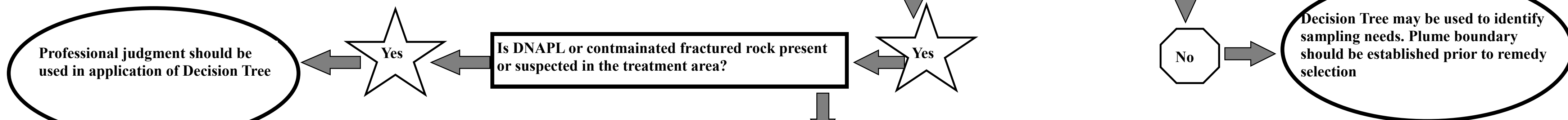


# CHLORINATED SOLVENT DECISION TREE

## Chlorinated Solvent Decision Tree Screening Questions

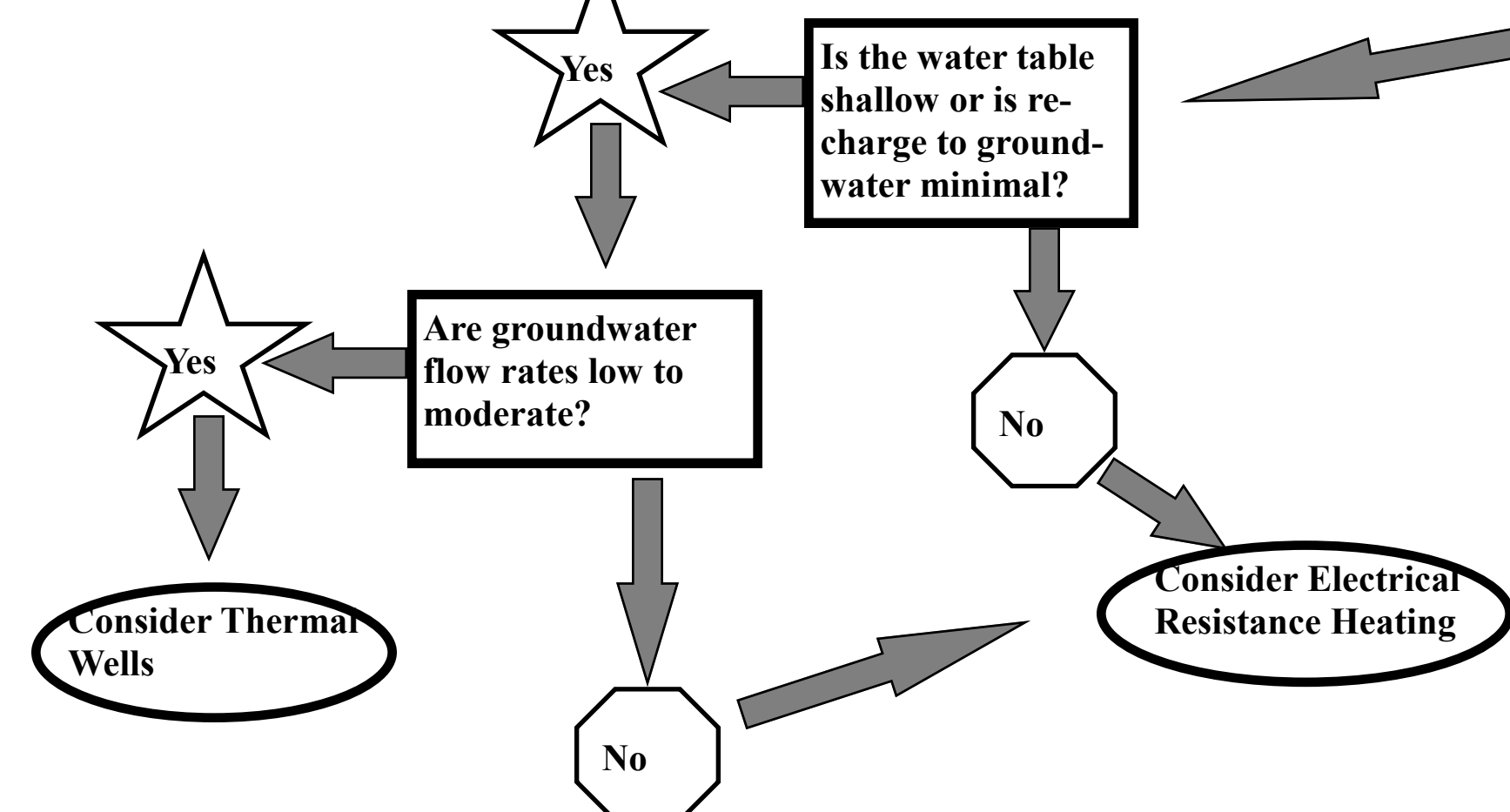
Is the area of groundwater contamination adequately defined?



Are contaminant concentrations >1000x MCL?

### THERMAL REMEDIES

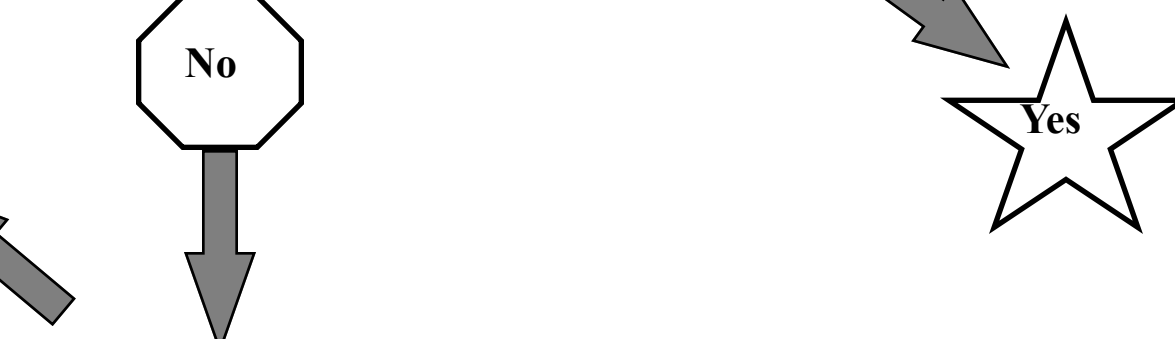
Note: Site specific evaluation of geology recommended to confirm selection of type of thermal method



Is a reduced remediation timeframe desired or needed?

### OTHER ACTIVE REMEDIES

Is ORP >+100 mV?



### ACTIVE REDUCING REMEDIES

Is pH = 6 or higher?

Does water contain sulfate or nitrate?

Are petroleum products present?

Does water contain sulfate or nitrate?

Successful Pilot Study needed before ERD should be considered

Zero Valent Iron Recommended Successful Pilot Study needed before ERD should be considered

### ACTIVE REDUCING REMEDIES with Nitrogen or Sulfate

Is Nitrate >1 mg/l?

Is Sulfate >20 mg/l?

Is Sulfate >20 mg/l?

ERD-Pilot Study needed ZVI - Longevity estimates should be considered Consider Air Sparging

ERD-Caution! Not advisable! ZVI - Longevity estimates should be considered; additives to prolong life span recommended

ZVI and ERD may be considered. Pilot study needed for ERD if pH<6

### PASSIVE REMEDIES

Is a reduced time frame to meet goals needed or desired?

Yes

Yes

Are nearby wells or surface water impacted by contaminants, or is there a potential for existing contaminated groundwater to impact a surface water body or a well above applicable criteria?

Phytoremediation or MNA viable

Yes

Is water table shallow?

Consider MNA

### ACTIVE OXIDATION REMEDIES

Is contaminated groundwater currently discharging to surface water?

Ozone Sparging or Air Sparging viable

Are there impacted public or private wells or irrigation wells?

Is there a potential for contaminated groundwater to enter surface water, a private or public well, or an irrigation well?

ISCO should be considered. Ozone, permanganate, Fenton's, persulfate, and other amendments available; pilot or bench-scale study may be performed to help select Amendment

Ozone Sparging and Air Sparging are viable options. ISCO may be considered with evaluation of travel times to nearest receptor and amendment longevity. Bench scale and pilot scale testing recommended to confirm longevity and effectiveness of amendment.

Note: For additional information, please refer to the Entire Chlorinated Solvent Decision Tree Document